

5617  
Process Sheet

Order Number : CU-DAR001 Dart Helicopters Services  
Drawing Name : SEAT RAIL  
Part Number : D38111  
Drawing Number : D3811 PREL  
Project Number : N/A  
Drawing Revision : PREL  
Material :  
Due Date : 18/08/2008  
Qty: 3 Um: Each

Issue : 11/08/2008 S.O. No. :  
Rev. : NC  
Issue : 11  
Type : MACHINED PARTS  
Previous Run :  
Drawn By : JLM  
Checked & Approved By :  
Drawing Date : 08.08.11  
Est Rev: A New Issue 08-07-31 JLM Verified By: DD



Additional Product

PRELIMINARY ISSUE

Number:



Seq. #: Machine Or Operation: Description:

1.0 M6061T6B1500X02500 6061-T6 Bar 1.50 x 2.50



Comment: Qty.: 2.1000 f(s)/Unit Total: 6.3000 f(s)  
6061-T6 Bar 2.500x 1.50  
Batch: 1107387

8.5 08/08/14

2.0 BAND SAW

BAND SAW



Comment: BAND SAW  
Cut blank 23.250" long

8.5 08/08/14

3.0 HAAS1

HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1- Mill as per Folio FA776Rev. ΔΔ & Dwg D3811 Rev: PREL

2-Deburr per dwg D3808

4.0 QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

8.5 08/08/14

5.0 MILLING CONV.

CONVENTIONAL MILLING MACHINE



Comment: CONVENTIONAL MILLING MACHINE  
1-DRILL REMAINING HOLES

8.5 08/08/14

## WORK ORDER CHANGES

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: D3811-1 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE (NCR)

NCR: 41119-2

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/08/14	3.0	ERROR IN program for 30° chamfer.  RC Program Error → prog fixed.	<i>[Signature]</i> Resum	- Scrup i. replace Qty 2 m <u>107384</u>  - fix program i black revised to w/o.	<i>[Signature]</i> 08/08/14  <i>[Signature]</i> 08/08/15		<i>[Signature]</i> Resum	<i>[Signature]</i> 08/08/15
08/08/15	3.0	Dimensions between holes off. Programming error. Prog. Fixed	<i>[Signature]</i> Resum				<i>[Signature]</i> Resum	<i>[Signature]</i> 08/08/15

NOTE: Date &amp; initial all entries



## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SEAT RAIL

Job Number: 41119

Part Number: D38111

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA 08/08/18

(3)

7.0

QC8

**ENGINEERING  
APPROVAL**

Comment: SECOND CHECK

08.08.18

08/08-08-18

8.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

(3x)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

w/o 41240

w 08.12.08

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/12/09

Job Completion



POSITIVE RECALL

EFFECTIVE 08/12/11

AUTH

RELEASED

DATE

08/12/05

w/o 08-12-08

DART AEROSPACE LTD		Work Order: 41119
Description:		Part Number: 3811-1
Inspection Dwg:	Rev:	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article

☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
22.20	±.030	22.20	/			
4.440 P.tch	±.010	4.440	/			
.40	±.030	.402	/			
1.400	±.010	1.401	/			
10.00	±.030	10.0005	/			
Ø.281 X .440	+ .006 - .001	Ø.281 X .440	/			
.590 P.tch	±.010	.590	/			
.780	±.010	.789	/			
.788 P.tch	±.010	.788	/			
23.00	±.030	23.00	/			
Ø.196	+ .006 - .001	Ø.196	/			
Cs. 1/2 Ø.358 X 100	+ .006 - .001	Ø.358 X 100	/			
1.576		1.577	/			
Ø.523	+ .006 - .001	Ø.523	/			Manual Mill
.37	±.030	.370	/			Manual Mill
1.08	±.030	1.080	/			Manual Mill
.44	±.030	.44	/			
.286 X 60°	±.010	.286 X 60°	/			
20.68	±.030	20.680	/			Manual Mill
.132	±.010	.130	/			

Measured by: SA
Date: 08/06/15

Audited by: [Signature]
Date: 08.08.18

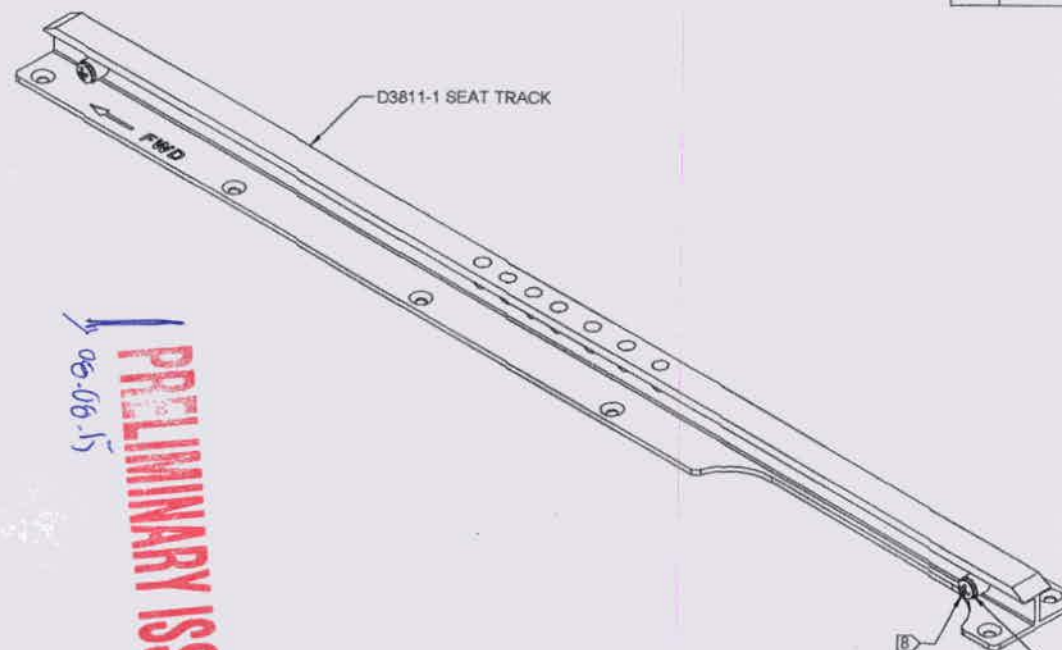
Prototype Approval: [Signature]
Date: [Signature]

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	





QTY -041	P/N	DESCRIPTION
X	D3811-041	SEAT TRACK ASSEMBLY
1	D3811-1	SEAT TRACK
4	D3811-3	BUSHING
2	MS21042L3	NUT
2	MS27039-1-15	SCREW



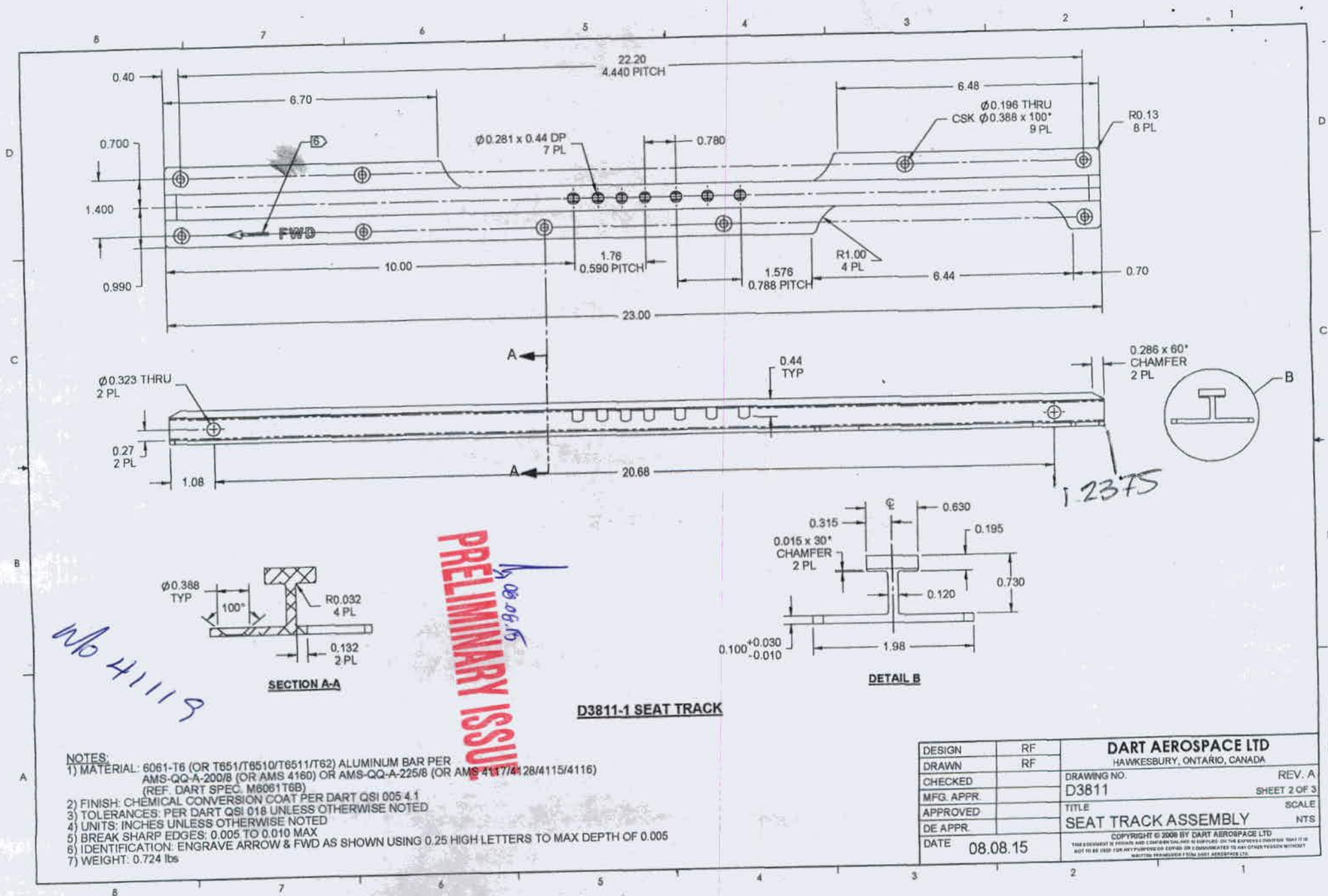
**D3811-041 SEAT TRACK ASSEMBLY**

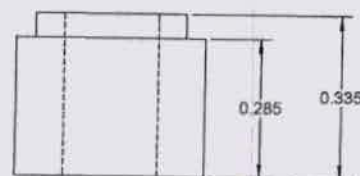
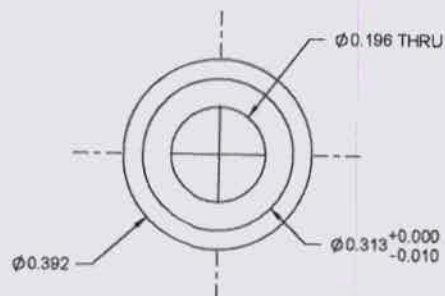
**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3811-041 & B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.76 lbs
- 8) TORQUE FASTENERS TO 20-25 in-lbs

A	NEW ISSUE	RF	08.08.11
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3811	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SEAT TRACK ASSEMBLY	NTS
DATE	08.08.15	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD  THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	







**D3811-3 BUSHING**

*08.08.15*  
**PRELIMINARY ISSUE**

*W/O 41119*

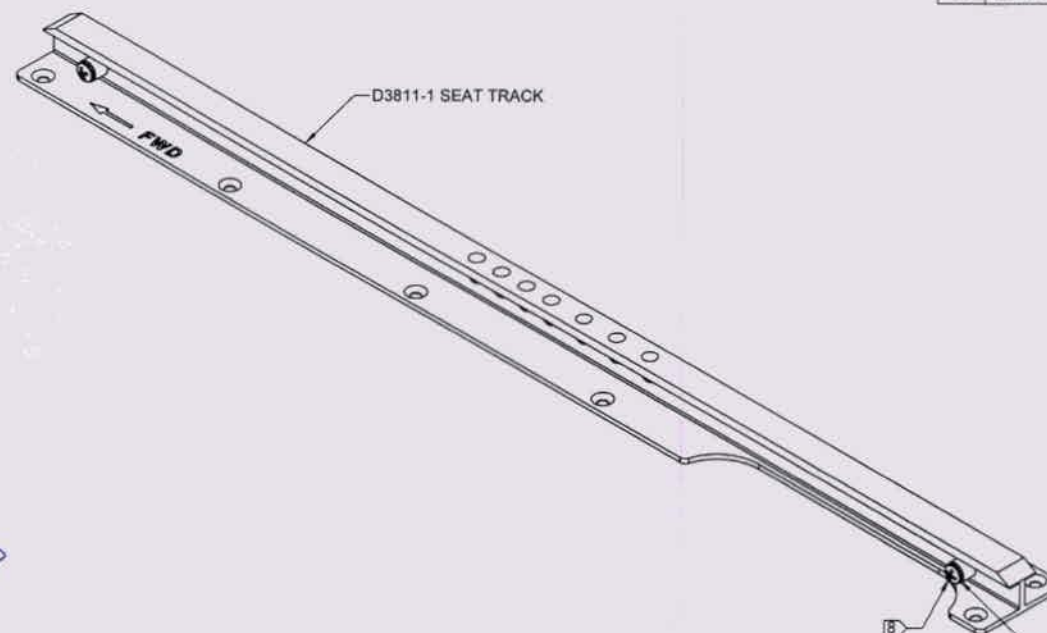
**NOTES:**

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM ROUND BAR PER AMS-QQ-A-200/8 (OR AMS 4160) OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4118) (DART REF. SPEC. M6061T6R)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.003 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3811	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SEAT TRACK ASSEMBLY	NTS
DATE	08.08.15	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



QTY -041	P/N	DESCRIPTION
X	D3811-041	SEAT TRACK ASSEMBLY
1	D3811-1	SEAT TRACK
4	D3811-3	BUSHING
2	MS21042L3	NUT
2	MS27039-1-15	SCREW



**D3811-041 SEAT TRACK ASSEMBLY**

**RELEASED**  
08-08-18

**NOTES**

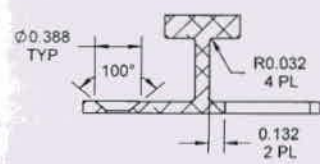
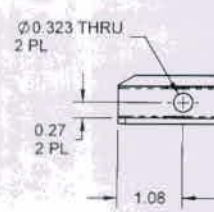
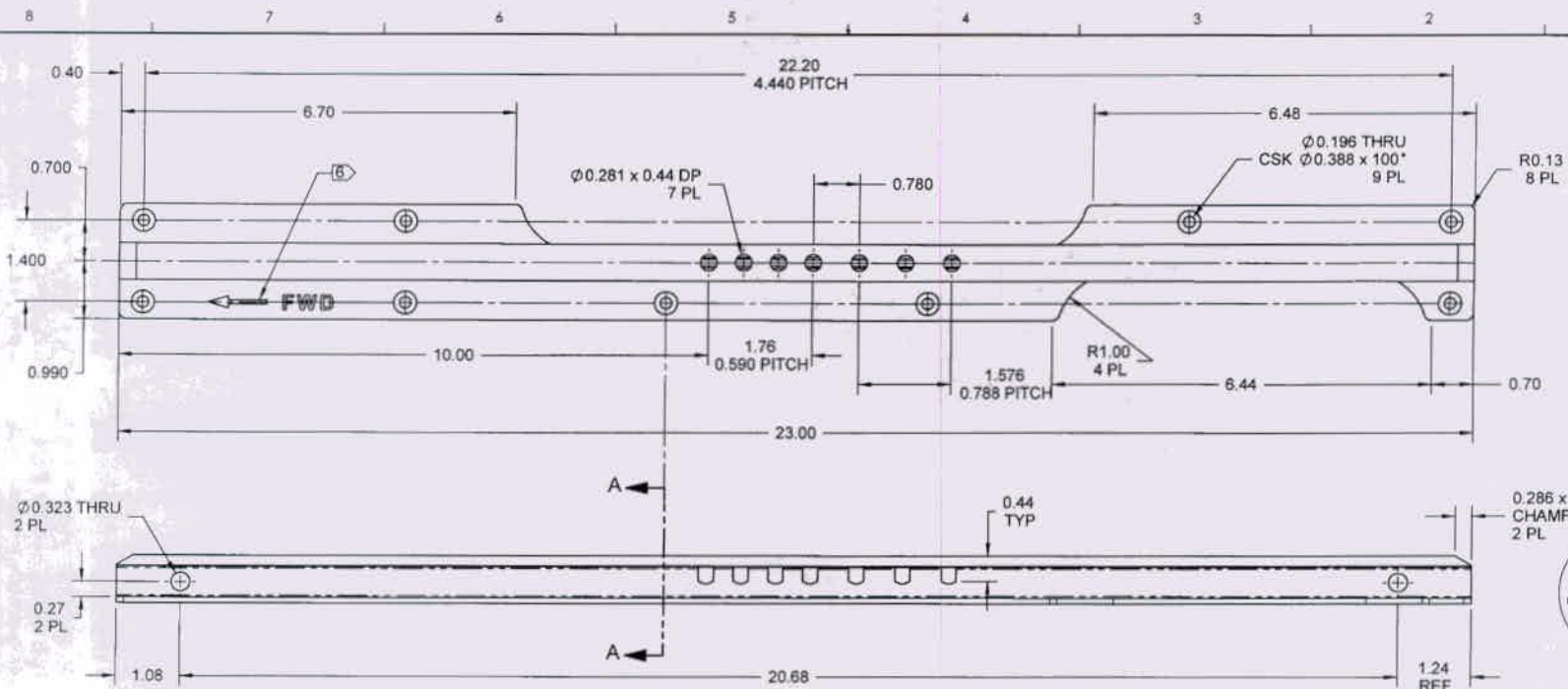
- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART ASSEMBLY P/N D3811-041 & B/N USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.76 lbs
- 8) TORQUE FASTENERS TO 20-25 in-lbs

A	NEW ISSUE	RF	08.08.18
REV	DESCRIPTION	BY	DATE
DESIGN	RF		
DRAWN	RF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.08.18		

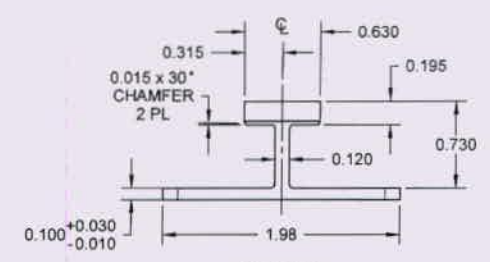
**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D3811** REV. A  
TITLE **SEAT TRACK ASSEMBLY** SCALE NTS  
SHEET 1 OF 3

COPYRIGHT © 2008 BY DART AEROSPACE LTD  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD



SECTION A-A



DETAIL B

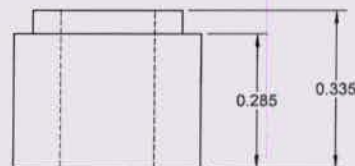
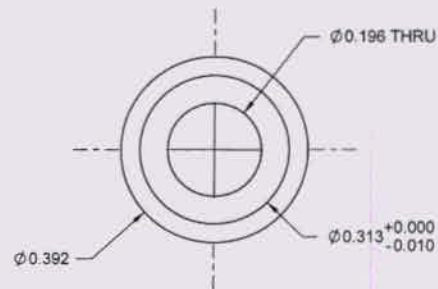
**D3811-1 SEAT TRACK**

- NOTES:
- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM BAR PER AMS-QQ-A-200/8 (OR AMS 4160) OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) (REF. DART SPEC. M6061T6B)
  - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
  - 6) IDENTIFICATION: ENGRAVE ARROW & FWD AS SHOWN USING 0.25 HIGH LETTERS TO MAX DEPTH OF 0.005
  - 7) WEIGHT: 0.724 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO. <b>D3811</b>	REV. A
MFG. APPR.		TITLE	SHEET 2 OF 3
APPROVED		<b>SEAT TRACK ASSEMBLY</b>	SCALE
DE APPR.			NTS
DATE	08.08.18	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

**RELEASED**  
08-09-30 1/10





W/O 41119

# **D3811-3 BUSHING**

**RELEASED**  
67-09-30-11-00

## **NOTES:**

- 1) MATERIAL: 6061-T6 (OR T651/T6510/T6511/T62) ALUMINUM ROUND BAR PER AMS-QQ-A-200/8 (OR AMS 4160) OR AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) (DART REF. SPEC. M6061T6R)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.003 lbs

DESIGN	RF	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D3811	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SEAT TRACK ASSEMBLY	NTS
DATE	08.08.18	<small>COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	